



Portland Harbor Superfund Site

Multnomah County, Oregon

EPA Region 10, December 2019

Final Explanation of Significant Differences

The U. S. Environmental Protection Agency has issued a final Explanation of Significant Differences that identifies changes to the Selected Remedy described in the 2017 Record of Decision for the Portland Harbor Superfund Site.

This fact sheet briefly describes the steps in the ESD process:

- The change to the cancer slope factor in EPA's Integrated Risk Information System (IRIS) that initiated the preparation of a proposed ESD.
- Public comments on the proposed ESD.
- EPA's response to public comments.
- Summary of changes made to the existing remedy by the ESD.

Site Documents

Site documents, including this final ESD, are available on EPA's website (<https://www.epa.gov/superfund/portland-harbor>). For more information, contact Laura Knudsen, at 206-553-1838 or knudsen.laura@epa.gov.

History and Background of this ESD

Within weeks of release of the ROD in January 2017, EPA's IRIS program issued an update of the *Toxicological Review of Benzo(a)pyrene*. That update reduced the cancer risk calculation for benzo(a)pyrene (BaP) from 7.3 to 1 milligrams per kilogram per day (mg/kg-day). This means that BaP is less potent for people who contact or ingest it than previously believed. Health risks are also reduced for chemicals similar to BaP known as carcinogenic polycyclic aromatic hydrocarbons (cPAHs), contaminants targeted for cleanup at the Site. After the IRIS change, EPA also identified an error in our calculation that describes the relationship between BaP in sediments and clam tissue. Correcting this error resulted in a 100-fold reduction in the cPAH sediment cleanup level for shellfish consumption.

The changes to the cPAH cleanup levels and total PAH remedial action level for contaminated sediments outside the navigation channel is appropriate and will maintain the protectiveness of the Selected Remedy for the Site. The sediment cleanup area is reduced by about 17 acres from the total 2,200 acres (less than one percent) and the estimated cost of the Selected Remedy is reduced by \$35 million from the original \$1 billion (roughly 3.5 percent). The updated remedial action level will require less sediment capping and removal, which reduces disruption and construction time and represents the latest science to protect human health and the environment.

The Public Comment Process

EPA thought it was important to hear the public's views on the proposed changes to the Selected Remedy. EPA's *Proposed Explanation of Significant Differences for the Portland Harbor Superfund Site* was issued for public comment in October 2018. To make public review and commenting easier, EPA prepared a simple companion fact sheet for the ESD. Both documents were issued on October 22, 2018 and available on-line and at the Multnomah County, St. John's, and Kenton libraries. On November 1, 2018, EPA presented information and answered questions in a webinar that was also recorded and posted online. EPA held an in-person community information session about the proposed ESD on November 20, 2018 and provided an additional presentation with a question and answer session at the December 12, 2018 Portland Harbor Quarterly Public Forum. The 30-day public comment period was extended for an additional 30 days and ended on December 21, 2018. Written comments were accepted by email, postal mail, and at all in-person information sessions.

What We Heard

Input was received from just over 1,100 commenters, including 13 local groups and organizations, 11 of the potentially responsible parties (PRPs), the Confederated Tribes and Bands of the Yakama Nation, and the Oregon Health Authority.

Most submissions had multiple comments and all comments were read, categorized, tracked, and entered into the administrative record for the Site.

The five most commonly received comments were:

- Do not modify the 2017 ROD.
- Synergistic effects have not been evaluated.
- The science used to make the change is flawed and controversial.
- The remedy change is driven by cost savings.
- Risks to wildlife and the environment have not been addressed.

Other issues included concerns about skin contact exposures, evaluation of breakdown products, risks to shellfish, exposure assumptions, river banks, environmental justice, and non-cancer risks. Many commenters believed that the ESD process was outside the normal process and not transparent or that changes should be postponed until the normal/typical/usual Superfund 5-year review. The responsiveness summary (included as part of the final ESD) presents the comments received, describes how EPA carefully considered all comments, and EPA's responses to the comments.

Changes We Made

The final ESD reflects the same changes presented in the proposed ESD. All these changes relate to cleanup levels for cPAH and remedial action level for total PAH and are shown below.

- Increased beach sediment cleanup levels for cPAHs from 12 to 85 micrograms per kilogram ($\mu\text{g}/\text{kg}$), based on the health risk calculations for recreational beach use. This applies to recreational beaches only.
- Added a direct contact sediment cleanup level for cPAHs of 774 $\mu\text{g}/\text{kg}$ for nearshore sediments, based on the tribal fishing contact health risk. This applies to all nearshore sediments, except recreational beach areas.
- Corrected and reduced the sediment cleanup levels for cPAHs based on shellfish consumption from 3,950 to 1,076 $\mu\text{g}/\text{kg}$, for a subsistence fisher health risk. This applies to the entire Site.
- Increased the target tissue level for cPAHs in shellfish tissue from 7.1 to 51.6 $\mu\text{g}/\text{kg}$, based on a subsistence fisher health risk. This applies to the entire Site. (Target fish tissue levels were not developed for cPAHs and are unaffected by this ESD.)
- Increased the principal threat waste threshold for cPAHs from 106,000 to 774,000 $\mu\text{g}/\text{kg}$ across the entire Site. Principal threat wastes are source materials considered to be highly toxic or highly mobile, that cannot be reliably contained, or would present a significant risk to human health or the environment. They are expected to be addressed through treatment or removal wherever practicable.
- Increased the total PAH remedial action level from 13,000 to 30,000 $\mu\text{g}/\text{kg}$. This applies to sediments outside the navigation channel. The "remedial action level" is the contaminant concentration level that the Selected Remedy requires to be removed or isolated by dredging or capping.